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AUTHOR Taylor, C. L.; And Others
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ABSTRACT

The effects on response rate of familiarity with survey sender was investigated in a study involving the University of Florida's Institute of Food and Agricultural Sciences faculty. The study was part of a mail survey of 3,467 citrus producers in 23 counties in Florida. Half (1,790) of the producers on the agricultural agent's mailing lists were randomly selected for inclusion in the response-rate study. A different questionnaire, containing items familiar to growers and managers of citrus, was mailed to each of four equivalent samples. Chi-square was used to treat the data as it was in mutually exclusive categories; an alpha level of 0.01 was selected. Results reveal that: (1) those potential respondents who were familiar with the sender of a mail survey were significantly more likely to respond than were those who were unfamiliar with the sender of a mail survey; (2) respondents familiar with senders responded faster; (3) respondents familiar with senders were more likely to be interested in study results; and (4) familiarity with the sender was associated with the size of the enterprise, a factor that may explain the degree of interest in findings on the part of respondents. (TJH)

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# Effects of Familiarity with Sender on Response Rate of Mail Questionnaires and Their Implications for Program Evaluation

C. L. Taylor
Professor and Evaluation Specialist

W. R. Summerhill
Associate Professor and Evaluation Specialist

G. D. Israel
Assistant Professor and Evaluation Specialist

K. C. Ruppert
Visiting Extension Agent

Program Evaluation and Organizational Development,
Cooperative Extension Service,
Institute of Food and Agricultural Sciences,
University of Florida,
Gainesville, Florida 32611

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## Effects of Familiarity With Sender on Response Rate of Mail Questionnaires and Their Implications for Program Evaluation

### Introduction

This paper focuses on the effects of familiarity of sender with the respondents on response rate and speed of return of mail questionnaires and their implications for program evaluation.

The effects of familiarity of the University of Florida's Institute of Food and Agricultural Sciences faculty were studied as part of a mail survey to 3,467 citrus producers in 23 counties in Florida. A sample was drawn from two different sampling frames of producers. One was from a list maintained by the local county agricultural agent (faculty of the University of Florida). It is assumed that producers on this list are familiar with the local agricultural agent and other faculty of the University of Florida who are involved in citrus educational and research work. Citrus growers are recipients of periodic mailings of newsletters, bulletins, research findings, and information on meetings and field days concerning citrus production, marketing, and management from agricultural agents and other faculty members of the Institute of Food and Agricultural Sciences of the University of Florida. The other list came from the Department of Citrus which is an agency of state government. Its major functions deal with establishing and regulating quality standards and marketing promotion. The agency is supported by a tax on each box of citrus which is paid for by the producer. However, and more important to this study, producers who are only on the Department of Citrus mailing list are not necessarily familiar with the sender of the mail questionnaire in this study.

One reason people respond to mail questionnaires is soundly grounded in social exchange theory (Dillman, 1978). Dillman draws heavily on work by Blau (1964) and Homans (1961) as a basis for much of his thinking on response to mail questionnaires. The theory maintains that people participate in any activity because of the reward they expect to receive. People also recognize that participation has both costs and rewards. However, they participate only when they feel the rewards are greater than the costs. Blau (1986) indicates that social exchange tends to engender feelings of personal obligation, gratitude and trust. Trusting that others will reward appropriately for a favor is an important aspect of social exchange.

One might theorize that citrus producers who are on a mailing list and continually receive information on the latest research, freeze protection, educational meetings and field days would have a feeling of personal gratitude and obligation to respond to a mail questionnaire. Also, these producers might feel they can trust the sender of the mail questionnaire to continue providing practical information on production and management of citrus.

The reward in social exchange is in context with the situation and may be influenced by many factors. Findings by Lawson (1949), Erodos (1957), and Lansdowne (1970) suggest that respondent interest in a subject is a factor that influences rate of return. Findings by Taylor and Summerhill (1985) reveal there is a significant relationship between severity of the issue and rate of response. The more severe the issue as perceived by the respondent the greater the response rate.

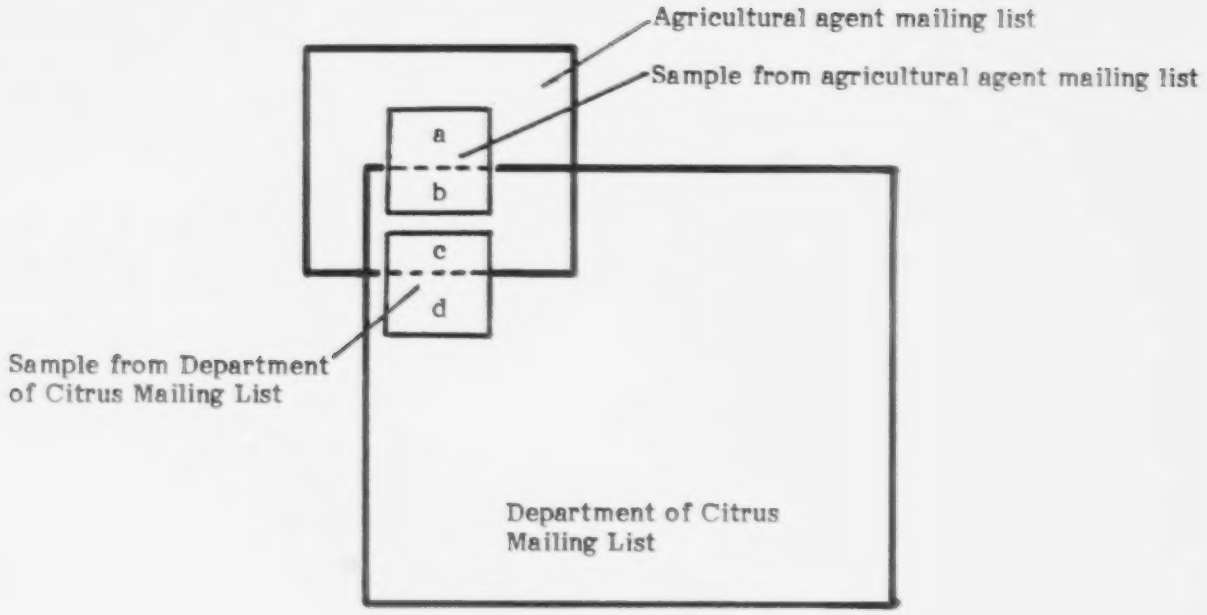
Some of the literature concerning the speed of response indicates that it may be influenced by various factors. Findings by Brown (1965) and Nichols and Meyer (1966) indicate that follow-up postcards increase response speed. Dillman and Fry (1974) and Cox (1974) report that personalization increases speed of response. Moss (1981) indicates that questionnaire format had a significant effect on response speed. It is not known if speed of response is related to familiarity of the sender with the respondent.

## Methodology

Agricultural agents and other faculty members who conducted the survey wanted to select a sample large enough to administer four different surveys dealing with production and management of citrus. Therefore, the sample was large enough for four equivalent samples. One-half (1790) of the producers on the agricultural agent's mailing lists were randomly selected. One-fourth (2476) of the names from the Department of Citrus were randomly selected. The sample from both lists contained 4266 names. However, after removing bad addresses and duplications, there were 3,467 producers selected from the two mailing lists. Figure 1 is a diagram of the sampling frames and from it can be described the comparison that was made to determine if those familiar with the sender responded differently than did those who were unfamiliar with the sender. It is noted that "a" and "b" and "c" are on the agricultural agent's mailing list and are considered familiar with the sender of the survey. There were 1627 potential respondents in the "familiar" sample. Names in "d" are on the Department of Citrus mailing list and are considered unfamiliar with the sender of the survey. There were 1840 potential respondents in the "unfamiliar" sample. Thus, survey data from a + b + c are compared with d.

Four different questionnaires were constructed that contained items familiar to growers and managers of citrus. Four equivalent samples were systematically selected and one questionnaire was administered to producers in each sample. The Total Design Method (Dillman, 1978) was followed in conducting the survey. Chi-square was used to treat the data as it is in mutually exclusive categories. An alpha level of .01 was selected.

Figure 1. Sampling frames used in this study.




## Results

### Response Rate Based on Familiarity With Sender

There was a significant difference in the response rate of those who were considered to be familiar and unfamiliar with the sender. Based on this study, a person who is familiar with the sender of a mail questionnaire is more likely to respond than a person who is unfamiliar with the sender. Table 1 reveals that 76 percent of the producers who are familiar with the sender responded, compared to 59 percent who were unfamiliar with the sender.

Table 1: Response Rate of Citrus Growers Based on Their Familiarity with Sender of a Mail Questionnaire

| Returned Questionnaire | Unfamiliar | | Familiar | | $X^2$ | P |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | | |
| Yes | 1079 | 59 | 1242 | 76 | 122.16 | .01 |
| No | 761 | 41 | 385 | 24 | | |
| Total | 1840 | 100 | 1627 | 100 | | |

Speed of Response Based on Familiarity

This study indicates that if the sender of a mail questionnaire is familiar with the respondent, return rate will be faster. Table 2 indicates that 67 percent of those who responded and were familiar with the sender returned their questionnaires during the first mailing wave period. This is compared with 57 percent who were unfamiliar with the sender. The first mailing wave was 16 days in length. That is, the first questionnaire mailing was on day 1 and 16 days later the second questionnaire mailing was made.

Table 2: Response Rate of Citrus Growers for Each Mailing Wave of a Mail Questionnaire Based on Their Familiarity With the Sender.

| Mailings | Unfamiliar | | Familiar | | $X^2$ | P |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | | |
| *Wave 1 | 610 | 57 | 827 | 67 | | |
| **Wave 2 | 260 | 25 | 258 | 21 | 20.655 | .01 |
| ***Wave 3 | 194 | 18 | 157 | 12 | | |
| Total | 1064 | 100 | 1242 | 100 | | |

*16 days in length.
**13 days in length.
***23 days in length.

Interest In Subject

Potential respondents had the opportunity to indicate that they wanted to receive a summary copy of the survey results. Having an interest in survey results would indicate an interest in the citrus business. Table 3 indicates that having an interest in the results of the survey is significantly associated with familiarity of sender. This study reveals that a much lower (28) percentage of those who were unfamiliar as compared with the percentage (60) who were familiar with the sender indicated they were interested in receiving a copy of the survey results.

Table 3: Response Rate of Citrus Growers by Interest in Survey Results and Familiarity With the Sender.

| Interest | Unfamiliar | | Familiar | | $X^2$ | P |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | | |
| Yes | 85 | 28 | 507 | 60 | | |
| No | 223 | 72 | 338 | 40 | 94.85 | .01 |
| Total | 308 | 100 | 845 | 100 | | |

Size of the enterprise may be associated with interest in the subject and it may help explain lower and slower response rates for those who are unfamiliar with the sender of a mail questionnaire. Table 4 indicates that sixty-one (61) percent of those who were unfamiliar with the sender had less than 10 acres. However, only 32 percent of those familiar with the sender had less than 10 acres of citrus.

Table 4: Response Rate of Citrus Growers by Size of Acreage and Familiarity With the Sender.

| Size | Unfamiliar No. | Unfamiliar % | Familiar No. | Familiar % | $X^2$ | P |
|---|---|---|---|---|---|---|
| <10 Acres | 645 | 61 | 397 | 32 | | |
| 10 >Acres | 419 | 39 | 845 | 68 | 104.10 | .01 |
| Total | 1064 | 100 | 1242 | 100 | | |

## Implications for Program Evaluation

Poor quality conclusions about impact

When all the people do not respond there is great potential for sample bias. This suggests that the people who responded are potentially different from those who did not respond. If error exists then one's estimates of the sample characteristics may be incorrect. This means one may draw poor quality conclusions about the impact of a program. The impact of the program may be under or over estimated. This situation provides policy makers with poor quality accountability information.

Takes longer to gather data

This study indicated a smaller percentage of those who were unfamiliar with the sender returned their questionnaire on the first mailing wave. This suggests that one could not expect to gather evaluation data as fast from unfamiliar clients as from those who are familiar with the sender. Thus, decision making concerning program adjustments and/or impact would be slower when gathering data from potential respondents who would be unfamiliar with the sender of a mail questionnaire.

Cost is greater

If one can generalize from this study, it costs more to gather evaluation data from those who are unfamiliar with the sender. Based on this study there are two major reasons for the greater cost. One of the major reasons, return rate is lower, 76 percent of those in the "familiar" category responded compared with 59 percent in the "unfamiliar" category. The other major reason, those in the "unfamiliar" category respond more slowly. This requires extra resources. They include the use of more questionnaire supplies, more postage, and more time to process the extra administrative matters.

The postage cost for each returned questionnaire from the "familiar" respondent category was $1.21 compared to $1.73 for those respondents in the "unfamiliar" category. It cost 43 percent more for postage for each response in the "unfamiliar" category. If one can extrapolate postage costs to other areas it soon becomes apparent that it costs more to gather evaluation data from unfamiliar clients than from familiar ones.

## Summary

The study reveals that those potential respondents who are familiar with the sender of a mail survey are significantly more likely to respond than those who are unfamiliar. Those who are familiar with the sender are going to respond faster. Also, those who are familiar with the sender are more likely to be interested in the findings about the subject. Familiarity with the sender was associated with size of enterprise which may help explain the degree of interest in findings about the subject as well as lower and slower response rates.

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